

## CLAIMS

What is claimed is:

- 1           1. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:  
3           a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,  
6           a blade holder that is coupled to said blade to define  
7 a cutting depth, said blade holder having a color that  
8 corresponds to said cutting depth of said blade.  
9  
10  
11           2. The blade assembly of claim 1, wherein said  
12 cutting depth is dependent upon a dimension from a front  
13 surface of said blade holder and said cutting edge of said  
14 blade.  
15  
16  
17           3. The blade assembly of claim 2, wherein said front  
18 surface includes a raised surface.  
19  
20  
21           4. The blade assembly of claim 1, wherein said blade  
22 holder includes a recess and a plurality of cavities.

1           5. The blade assembly of claim 1, wherein said blade  
2 holder has a hole that receives a bonding agent that bonds  
3 said blade holder to said blade.

1           6. The blade assembly of claim 1, wherein said blade  
2 holder extends from said rear edge of said blade.

1           7. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3           a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6           a blade holder that is coupled to said blade to define  
7 a cutting depth, said blade holder having indicator means  
8 for providing an indication of said cutting depth of said  
9 blade.

1           8. The blade assembly of claim 7, wherein said  
2 cutting depth is dependent upon a dimension from a front  
3 surface of said blade holder and said cutting edge of said  
4 blade.

1        9. The blade assembly of claim 8, wherein said front  
2 surface includes a raised surface.

1        10. The blade assembly of claim 7, wherein said blade  
2 holder includes a recess and a plurality of cavities.

1        11. The blade assembly of claim 7, wherein said blade  
2 holder has a hole that receives a bonding agent that bonds  
3 said blade holder to said blade.

1        12. The blade assembly of claim 7, wherein said blade  
2 holder extends from said rear edge of said blade.

1        13. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3        a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6        a blade holder that is coupled to said blade, said  
7 blade having a recess and a plurality of cavities.

1        14.    The blade assembly of claim 13, wherein said  
2 blade holder has a front surface that includes a raised  
3 surface.

1        15.    The blade assembly of claim 13, wherein said blade  
2 holder has a hole that receives a bonding agent that bonds  
3 said blade holder to said blade.

1        16.    The blade assembly of claim 13, wherein said blade  
2 holder extends from said rear edge of said blade.

1        17.    A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3        a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6        a blade holder that is coupled to said blade, said  
7 blade holder having a recess and cavity means.

1        18.    The blade assembly of claim 17, wherein said  
2 blade holder has a front surface that includes a raised  
3 surface.

1        19.    The blade assembly of claim 17, wherein said blade  
2 holder has a hole that receives a bonding agent that bonds  
3 said blade holder to said blade.

1        20.    The blade assembly of claim 17, wherein said blade  
2 holder extends from said rear edge of said blade.

1        21.    A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3        a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge;

6        a blade holder that is coupled to said blade, said  
7 blade having a recess and a hole; and,

8        a bonding agent that attaches said blade holder to said  
9 blade.

1           22.    The blade assembly of claim 21, wherein said  
2 blade holder has a front surface that includes a raised  
3 surface.

1           23.    The blade assembly of claim 21, wherein said blade  
2 holder extends from said rear edge of said blade.

1           24.    A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3           a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6           a blade holder that is coupled to said blade, said  
7 blade holder having a recess and bonding access means; and,

8           bonding means for bonding said blade holder to said  
9 blade.

1           25.    The blade assembly of claim 24, wherein said blade  
2 holder has a front surface that includes a raised surface.

1           26. The blade assembly of claim 24, wherein said blade  
2 holder extends from said rear edge of said blade.

1           27. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3           a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6           a blade holder that is coupled to said blade, said  
7 blade having a front surface that includes a raised  
8 surface.

1           28. The blade assembly of claim 27, wherein said blade  
2 holder extends from said rear edge of said blade.

1           29. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3           a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said  
7 blade holder having a front surface and reference surface  
8 means for establishing a cutting depth of said blade.

1 30. The blade assembly of claim 29, wherein said blade  
2 holder extends from said rear edge of said blade.

1 31. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a  
4 pair of side edges that extend between said cutting edge  
5 and said rear edge; and,

6 a blade holder that is coupled to said blade such that  
said blade holder extends from said rear edge of said  
blade.

1 32. An assembly tool for assembling a blade holder to  
2 a blade to create a blade assembly used to cut a cornea,  
3 comprising:

4 a base;

5 a slide bar coupled to said base; and,

6 an adjustable stop that is coupled to said base.



7        33. The assembly tool of claim 32, further comprising  
8 a cannula coupled to said base.

1        34. The assembly tool of claim 32, wherein said  
2 adjustable stop includes a micrometer.

1        35. The assembly tool of claim 32, further comprising  
2 a pin attached to said base.

36. An assembly tool for assembling a blade holder to  
a blade to create a blade assembly used to cut a cornea,  
comprising:

base means to support a blade;

press means for pressing a blade holder into the blade;

and,

adjustment means for varying a cutting depth of the  
blade.

1        37. The assembly tool of claim 36, further comprising  
2 bonding means for introducing a bonding agent to the blade  
3 to bond the blade holder to the blade.

1           38. The assembly tool of claim 36, wherein said  
2 adjustment means includes a micrometer.

1           39. The assembly tool of claim 36, further comprising  
2 alignment means attached to said base.

1           40. A method for assembling a blade assembly,  
2 comprising;  
3           adjusting a position of a stop; and,  
4           pushing a blade holder onto a blade until the blade  
5 holder engages the stop.

1           41. A blade package, comprising:  
2           a pair of covers, at least one of said covers having an  
3 opening to allow inspection of the blade assembly.

1           42. A blade package, comprising:  
2           a pair of covers, at least one cover having a color  
3 indicative of a cutting depth of the blade assembly.

1           43. A blade package, comprising:

2 a pair of covers that enclose a blade assembly, at  
3 least one cover having means for providing an indication of  
4 the cutting depth of the blade assembly.

1 44. A gauge for a blade assembly, comprising:  
2 a housing that has a slot adapted to receive a blade  
3 and a cavity adapted to receive a blade holder attached to  
4 the blade.

1 45. A blade assembly that can be assembled into a  
2 medical device used to cut a cornea, comprising;  
3 a blade holder having a front surface; and  
4 a blade attached to said blade holder, said blade  
5 having a pair of side edges, a cutting edge, a rear edge  
6 and an opening located between said cutting edge and said  
7 front surface between said side edges.

1 46. A caliper assembly for measuring a corneal flap,  
2 comprising:  
3 a caliper that has a readout and a tip; and,  
4 a cover attached to said tip.

1        47. A method for measuring a corneal flap, comprising:  
2        attaching a pair of covers to a pair of tips of a  
3 caliper;  
4        measuring a combined thickness of the covers;  
5        reading a measurement of a corneal flap located between  
6 the cover; and,  
7        determining the thickness of the corneal flap by  
8 subtracting the thicknesses of the covers from the reading.